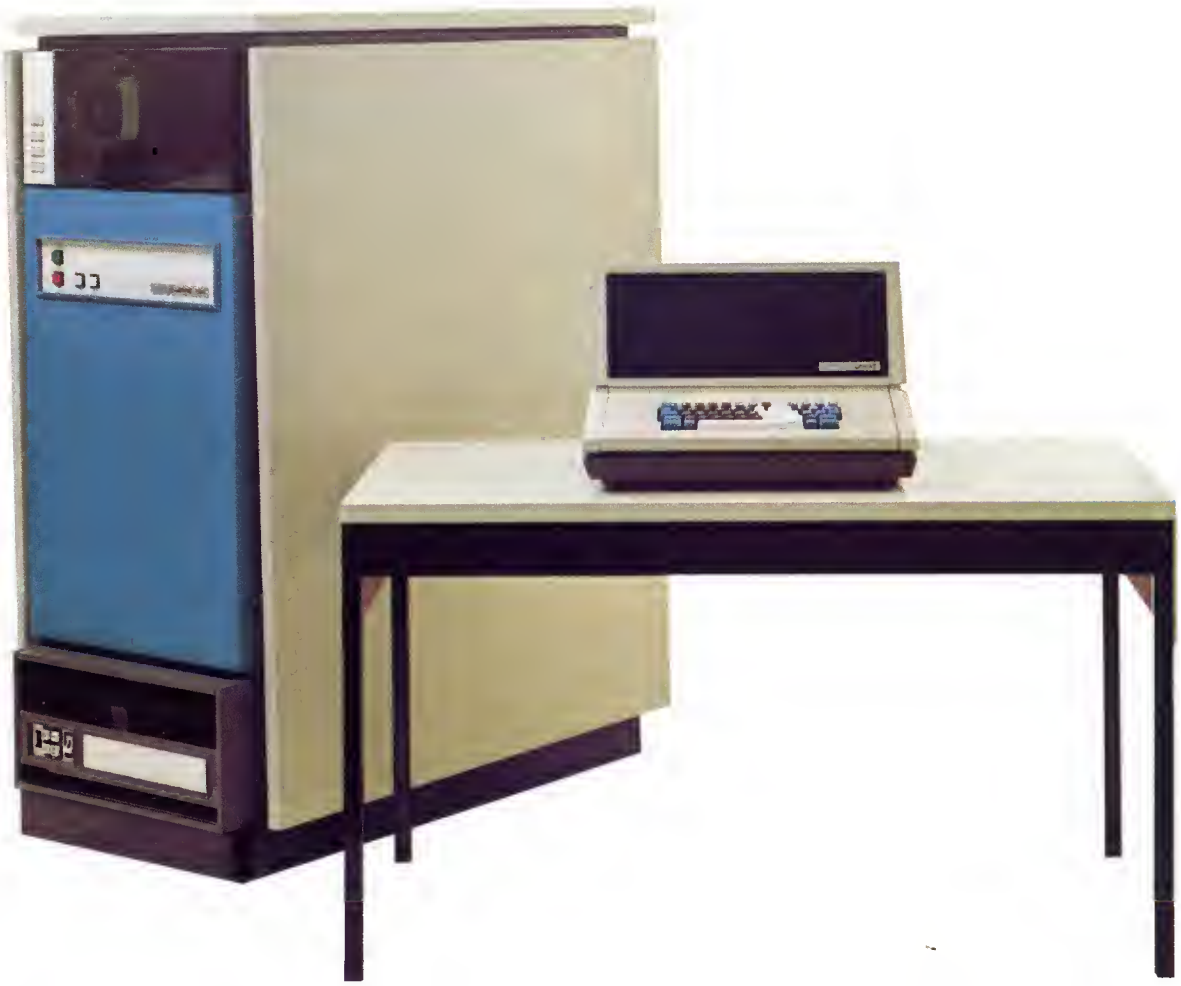
1900 Computer-Assisted Data-Entry System



The SPERRY UNIVAC™ 1900 Computer-Assisted Data-Entry System (CADE) combines the versatility of a processor specifically designed for data entry with advanced solid-state storage and low-cost disc and tape subsystems to give you advantages of speed, economy and operating ease.

The central control unit is a 16-bit word processor with a basic set of instructions that lets you specify over 95% of instructions in one word. Programming is uncomplicated, as format and output programs are prepared on simple coding sheets, using check boxes and simple statements.

The 1900 CADE comes with a modular semiconductor memory expandable to 128K bytes in 8K byte increments. The system can also handle one to four disc-storage drives containing one or two platters each. Each basic disc-drive platter will store 2.2 million characters, for a total capacity of 17.6 million bytes. One to four magnetic tape units with 7- or 9-track capability can also be included. They are NRZI and phase-encoded, for 556, 800 and 1600 BPI.

Keystations are a little larger than a standard office typewriter and can be placed up to 1,000 feet from the central processor. They contain both a data-entry keyboard and a 9-inch visual display with 12 lines of 40 characters each, divided into status and data areas.

The 1900 CADE lets operators key data in the most efficient form, then reformat on output to meet the requirements of your mainframe. It automatically inserts stored, repetitive and calculated data. CADE validates data—keystroke by keystroke—as the data enters the system. It reduces the need for verification and consequent mainframe edit runs.

In its update mode the 1900 features fast, easy updating of data files by means of a few keystrokes. Only variable data need be keyed.

SPERRY UNIVAC

Released February 1975

For better control of operator performance, the 1900 automatically keeps track of all jobs, with operator statistics and real-time clock.

The 1900 CADE's powerful set of supervisory functions gives positive control of file movement, editing, reformatting, copying, listing, reporting, program entry, compiling and storage.

The 1900 converses in plain language—easy to use by operator and supervisor.

All in all, the 1900 CADE features ease of operator learning, tutorial display, the simplicity of check-box programming, reduction of errors reaching the mainframe, quick and easy validation—and the ability to have data capture performed in the originating department.

With the 1900 CADE, you step into the future of data capture with an advanced key-to-disc system supported by Sperry Univac and its worldwide sales and service network noted for responsiveness and excellence.

3541 Keystations

COLORS

Base . . . . . Brown
Keyboard Bezel . . . . . Brown
Other Case Work . . . . Pearl Gray

FUNCTIONAL CHARACTERISTICS

The keystation consists of an electronic keyboard and video screen that is contained in a compact, single cabinet. The 9″ video screen is formatted into twelve lines of forty characters each for a total display of 480 characters. Two display lines are used for status and nine lines for data display status. Data areas are separated by a line used for messages to the operator.

There are three keyboard configurations offered, a keypunch, a keypunch with adding machine numeric pad and a typewriter with ten key numeric pad overlayed.

By keying the proper password, any keystation can become the Supervisor Station. The keystation can be up to 1,000 feet away from the CPU by a thin (0.2″) coaxial cable.

- 32 keystations are supported on the system.
- The keyboard has full upper and lower case alpha plus all the normal numeric and special characters.

PHYSICAL CHARACTERISTICS

Width	18 5/16″ (48 cm)
Depth	19½″ (51 cm)
Height	12″ (31 cm)
Weight	60 lbs (27 kg)
Floor Loading	23 lbs/ft² (111 kg/m²)

Heat Dissipation
512 BTU/hr (129 K cal/hr)

Air Circulation
Input—Room Air
Exhaust—Into Room

POWER REQUIREMENTS

50 or 60 Hz
105V, 115V, 125V
20A-1P Breaker
Single Phase, 2 wire & ground
(No more than 10 units)
220, 230, 240
Single Phase, 2 wire & ground
20A-2P Breaker (60 Hz)
20A-1P Breaker (50 Hz)
(No more than 20 units)

Keystation Table F2036-00

COLORS

Top . . . . . Putty Gray
Rear & Side Panels . . Pearl Gray
Drawer . . . . . Pearl Gray
Legs & Drawer Hardware . . . Satin Chrome Finish

FUNCTIONAL CHARACTERISTICS

Provides work surface and table for mounting the 3541 keystation.

A drawer for operator convenience is on the left side of the table with modesty panels on the rear and sides.

PHYSICAL CHARACTERISTICS

Width 48″
Depth 24″
Height 25¾″ (table top to floor)

Tape Subsystem 0869-00, 02, 04

COLORS

Control Panels . . . Pearl Gray
Case Work . . . . . Brown
Panels Below Desk Top . . . . . Brown
Desk Top . . . . . Formica Gray

PHYSICAL CHARACTERISTICS

Data Density—
1600 BPI Phase Encoded
800, 556 BPI NRZI
Tape Velocity—
37.5 IPS Read-after-Write
Number of tracks—7 or 9
Recording Mode—
NRZI or Phase Encoded
Tape Specification—
0.5 inches (12.7 mm) wide
1.5 mill (38.1 microns) thick
Computer Grade
Rewind Speed—200 IPS
Reel Size—10½″
Reel Capacity—2400′

PHYSICAL CHARACTERISTICS

Width 30″ (76 cm)
Depth 24″ (61 cm)
Height 28½″ (72 cm)
Weight 150 lbs (68 kg)
Floor Loading—
30 lbs/ft² (147 kg/m²)

Heat Dissipation
597 BTU/hr (150 K cal/hr)

Air Circulation
Input—Room Air
Exhaust—Into Room

POWER REQUIREMENTS

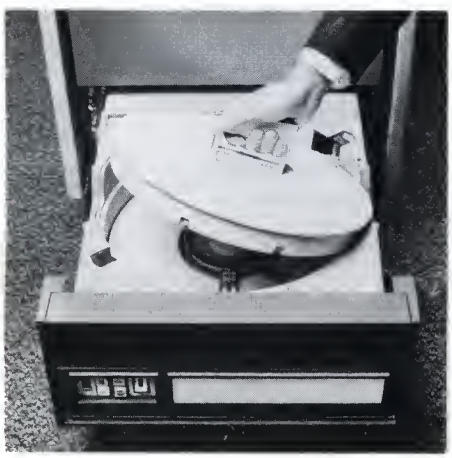
0.175 KVA
50-60 Hz, 20A-1P Breaker
105V, 115V, 125V
Single Phase, 2 wire & ground
220V, 230V, 240V
20A-2P Breaker
Single Phase, 2 wire & ground

Communications Adapter F2238-00

The communications adapter is an integrated feature of the SPERRY UNIVAC CADE System. The communication adapter (F2238-00) provides a RS232/CCITT interface for synchronous data transmission in half-duplex mode, at speeds up to 9600 BPS with the appropriate lines and modems. It allows a CADE System to communicate to another CADE System, other UNIVAC Computer Systems, and IBM Systems.

Sperry Univac Compatibility

Uniscope 100 Display Terminal communication selection (C-2239-00) allows the communication adapter to emulate the communications line procedure of the Uniscope 100. This enables the CADE System to communicate with UNIVAC Series 90 and 1100 Systems. Emulation will be for a polled environment, irrespective of whether communication over a multipoint or point-to-point network. The system will handle a single data line.



1900 CADE/IBM Compatibility

The communication adapter is capable of emulating the IBM 2780, using IBM Binary Synchronous Communication (BSC) conventions, using the following selections:

C2239-01—2780 Multipoint Communications (ASCII)

C2239-02—2780 Multipoint Communications (EBCDIC)

C2239-03—Provides the emulation of 2780 point-to-point communications procedures. Allow CADE to CADE communications with ASCII coding.

C-2239-04—Provides the same capabilities as C-2239-03 but with EBCDIC Coding

The following features (optional on IBM 2780, 3780) will be supported:

- Trailing Blank Truncation
- Blank Compression
- Horizontal Tabbing
- Multi-Record Formatting
- EBCDIC Transparency
- Multiple Record Transmission
- Extended Inquiry Retry
- Internal Clock
- Automatic Answer/Automatic Hang UP

Memory Utilization

After initialization of data communications by the supervisor, provided sufficient memory is available, data communications, data entry, and supervision functions can exist concurrently. There is no increase in the basic operating system memory requirements. Memory requirements for data communications are approximately 8,192 bytes of storage.

0775-04 200 Line per minute Matrix Printer

0775-04 Line Printer

COLORS

Cover—Pearl Gray

Sides—Charcoal Brown

FUNCTIONAL CHARACTERISTICS

Print Speed—200 LPM

When printing lower case alpha that have descenders (i.e., y, p) the print speed for those lines will be 165 LPM.

Print Positions—132

Character Set—96 USASCII—optional Foreign, Kata Kana

Character Dot Matrix—5 × 7

Character Size—.062 × .096 inches

Character Spacing—10 characters per inch

Print Registration—non-accumulative horizontal ± .006 inches, and vertical ± .004 inches.

Line Spacing—6 or 8 lines per inch selectable

Paper Advance—4 inches per second.

Forms—Continuous fanfold, edge sprocketed, with 4 to 14⅞ inches wide; up to 6 part.

Forms Control—Tape controlled by industry standard 8 channel

Ribbon—Reuseable fabric ribbon (¾″ × 40 yards) reel to reel. Life of 12 million characters.

PHYSICAL CHARACTERISTICS

Width—28 inches (71.1 cm)

Depth—24.5 inches (62.2 cm)

Height—11 inches (27.9 cm)

Height on Stand—39.5 inches (100.3 cm)

Weight 150 lbs. (68 kg.)

Environmental Temperature—50 to 105 degrees Fahrenheit 10 to 40 degrees Centigrade

POWER REQUIREMENTS

Line Voltages

Strappable in 3 ranges

100 VAC, 90 to 110 VAC 50/60 HZ ± .5HZ

122 VAC, 105 to 140 VAC 50/60 HZ ± .5 HZ

225 VAC, 187 to 264 VAC 50/60 HZ ± .5 HZ

Single Phase

10 AMP 2 P Circuit Breaker

2 wire and Ground

Disc Subsystem
F2029-00, 01

COLORS

Door Handle .....Brown
Outer Bezel .....Brown
Accent Panel .....Pearl Gray
Control Panel .....Pearl Gray

	F2090-00	F2029-01
Recording Technique	Frequency Doubling	Frequency Doubling
Bit Density	2200 BPI	2200 BPI
Track Spacing	.010 in.	.010 in.
Data Rate	1.562M Hz at 1500 RPM	
Recording Medium	5440 cartridge (not supplied)	5440 cartridge (not supplied)

CAPACITY

Bits per disc	25,000,000	50,000,000
Bits per cartridge		
Fixed	N/A	25,000,000
Removable	25,000,000	25,000,000
Bits per track	62,500	62,500
Bits per cylinder	125,000	125,000
Track per inch	100	100
Track per unit	406	812
Cylinders per unit	203	203

SPEED

Rotation (RPM)	1500 ± 1%
Latency Average	20 ms at 1500 RPM
Positioning (inc. settle)	
Track to track	9 ms
Average	35 ms
Maximum	60 ms

PHYSICAL CHARACTERISTICS

Width—Standard 19 inch panel
Depth—26 inch rack depth; 3¼ inch front overhang
Height—8¾ inches
Weight—130 lbs.

POWER REQUIREMENTS

Supplied by F3037

8541 Character Printer

COLORS

Top .....Pale Gray
Batten .....Slate Gray
Legs .....Brushed Chrome

FUNCTIONAL CHARACTERISTICS

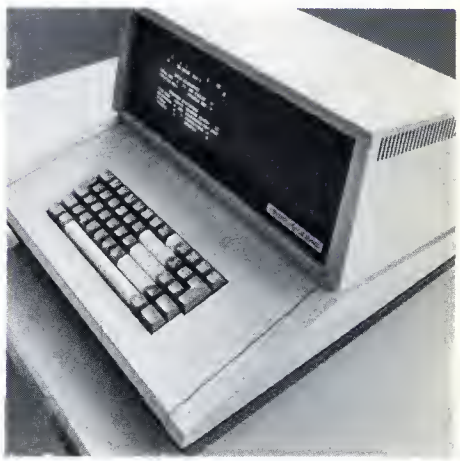
Print Speed—30 char/sec
Print Wheel Selections—EBCDIC
Ink Roller—Black
Printable Characters—63
Print Positions—132
Spacing—10 characters per inch
6 lines per inch
Paper Feed—30 lines/sec
Home Rate—72 lines/sec
Form—Up to 6 part continuously sprocketed form

PHYSICAL CHARACTERISTICS

Width—27⅝″ (72 cm)
Height—35⅝″ (91 cm)
Depth—41″ (108 cm) including table top and paper rack
Weight—169 lbs (77 kg)
Floor Loading—30 lbs/ft² (147 kg/m²)
Heat Dissipation—1,000 BTU/hr (252 K cal/hr)

POWER REQUIREMENTS

60 Hz
115V, Single Phase
20A-1P Breaker
2 wire-& ground
50 Hz
220V, Single Phase
20A-2P Breaker
2 wire & ground



Tape Subsystem
F-2026-00, 02, 04

COLOR

Control Panel . . . . . Pearl Gray

FUNCTIONAL CHARACTERISTICS

Data Density—
1600 BPI Phase Encoded
800, 556, BPI, NRZI

Tape Velocity—18.75 IPS,
Read-After-Write

Number of Tracks—7 or 9

Recording Mode—
NRZI or Phase Encoded

Tape Specifications—
0.5 in. (12.7 mm) wide,
1.5 mil (38.1 microns) thick,
Computer Grade

Rewind Speed—
100 IPS (nominal)

Reel Size—7 inches

Reel Capacity—600 foot

PHYSICAL CHARACTERISTICS

Width—19 inches

Depth—8.75 inches

Height—8.75 inches

Weight—25 lbs (11.4 kg)

POWER REQUIREMENTS

Power provided by F3037

1900 CADE Processor
3037-99

COLORS

Standard Colors

Front & Back Panel . . . . . Ceramic Blue

Control Panels . . . Pearl Gray

Side Panels . . . . . Pearl Gray

Top Surface . . . . . Putty Gray Formica

FUNCTIONAL CHARACTERISTICS

Main Storage

49,152 Bytes expandable to 131,072 Bytes in increments of 8,192 Bytes

Selector Channel

One selector channel used for connecting the tape drives to the CPU (and any future optional peripheral devices). The Selector Channel is designed to efficiently transfer blocks of data in the burst mode between the selected peripheral device and the main memory. This transfer takes place by direct memory access with the Selector Channel stealing memory cycles from the CPU or other controllers attached to the bus.

1900 CADE Processor
3037-99 (continued)

KEYSTATION MULTIPLEXER

The keystation multiplexer coordinates all communications to and from the keystation. A Keystation Multiplexer is capable of handling 32 keystations and one 30 char/sec printer. (In an emergency, it is capable of handling 62 keystations and two 30 char/sec printers.) Four separate coaxial cables provide for connections of keystations using the "daisy chain" technique. Each coaxial cable can have an overall length of up to 1,000 feet.

DISC CONTROLLER & DISC DRIVES

The disc controller is capable of controlling four single platter or four dual platter disc drives. A second controller (optional F2028-00) is available for overlap operation when two or more discs are present, not for increased disc drive capacity. Each disc drive contains a single or dual platter disc. Each platter contains 2.2M Bytes of storage. The average access time for reading information from the disc shall not exceed 55 ms. The average time for writing and checking shall not exceed 95 ms.

FORMATTER INTERFACE—TAPE FORMATTERS

The CPU contains a formatter interface to connect the Selector Channel to either an NRZI or Phase Encoded Formatter. In turn, either tape Formatter may connect to one or up to four magnetic tape units. It is possible to connect both an NRZI formatter and a Phase Encoder Formatter to the same formatter interface. Each tape formatter may then connect separately to one or more magnetic tape units for a collective total of up to four magnetic tape units.

PHYSICAL CHARACTERISTICS

Provides housing for up to two 7″ tape drives (F2026-00, 02, 04, 06) and one disc drive (F2029-00, 01) or two disc drives (F2029-00, 01) and one 7″ tape drive (F2026-00, 02, 04, 06).

Width—22½″ (58 cm)

Depth—30¼″ (102 cm)

Height—53″ (135 cm)

Weight—600 lbs. (272 kg)
800 lbs. (363 kg) max. options installed

Floor Loading—
94 lbs/ft² (459 kg/m²)
125 lbs/ft² (613 kg/m²) max. options installed

Heat Dissipation

8534 BTU/hr (2167 K cal/hr) nominal

Air Circulation

Input room air (lower rear panel)

Exhaust into room (upper rear panel)

POWER REQUIREMENTS

50 or 60 Hz

115V, single phase, 2 wire & ground (2 cables required)

20A-1P Breaker (2) (separate breaker circuit for each power connection)

Receptacle (60 Hz)

NEMA configuration LG-20R

Hubbel, Inc. Part No. 2320

UNIVAC Part No. 5035189

Grounding: Earth ground through AC power cord

Power:
2.0 KVA
4.0 KVA (max. options installed)

1900 CADE Processor
3037-97

Same as 3037-99 with the exception as follows:

POWER REQUIREMENTS

50 or 60 Hz

230V, single phase
20A-2P Breaker (60 Hz)

2 wire & ground (single cable)
20A-1P Breaker (50 Hz)

SPERRY UNIVAC

U5787

7502 Printed in U.S.A.